# NVR&IPCAM

## (USER MANUAL)

（V1.0）

**Thanks for choosing our products, please read this manual carefully before use!**

# NOTICE

## Installation condition

1) In order to ensure your rights, please read this manual carefully before installation.
2) This machine is indoor equipment. In order to prevent a short circuit or shock hazard, do not place it in rain or wet environment.
3) If there is any solid or liquid in the machine, please disconnect the power at once, and ask the qualified technicians to check before restart.
4) It cannot be installed in excessive dust or mechanical vibration place. It cannot be installed near any heat sources such as radiators, air duct. Please put it in air circulation place.
5) It is a precision machine; almost no part can be repaired by user. Do not disassemble this product. Failure must be repaired by qualified technicians.
6) Please disconnect the power before connecting with other devices.
7) Please turn off and pull out the pug, If the machine is not be used for a long time,
8) Do not use the power which could not match the power adapter.
9) In project installation, connect the ground to avoid lightning damage to the main chip. If the monitor must be grounded, please avoid leakage damage to the machine.
**10)** Please select high quality hard disk which could meet the working demand of NVR. Please purchase hard disk from regular merchants.

## Installation Instructions

1) The Manual is for reference only.
2) The products are updated without extra notice.
3) Please contact our customer service department for the latest procedures and additional documentation.
4) Description of doubt or dispute subject to the final interpretation of our company.

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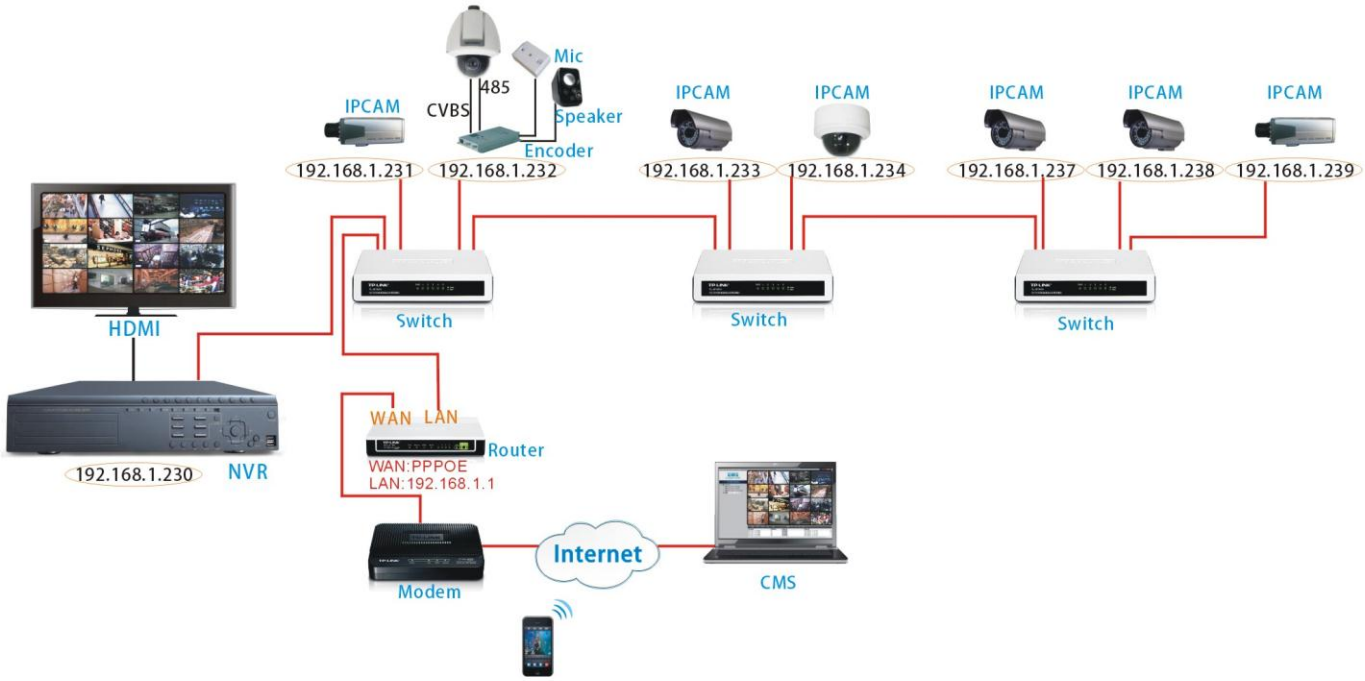
# 1 Preparation

## 1.1 The topology

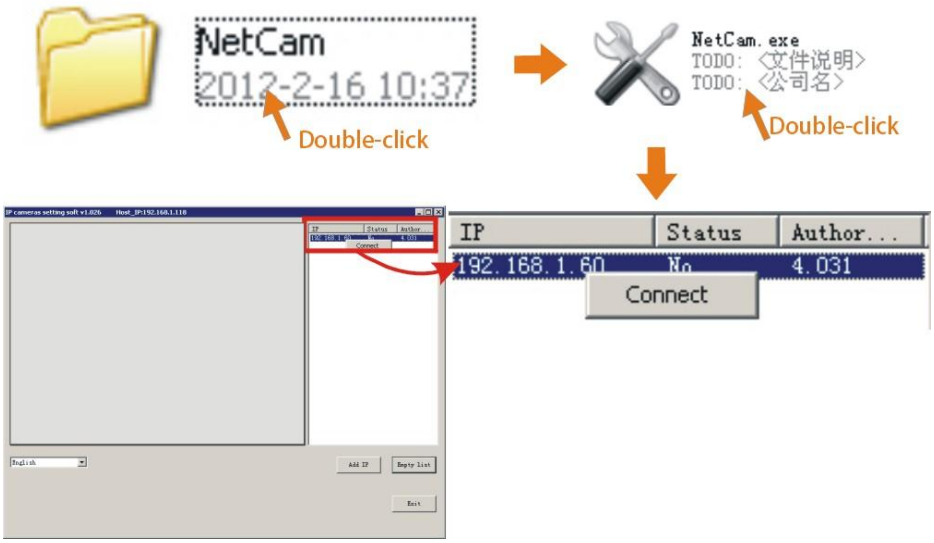



## 1.2 IPCAM&NVR connection settings

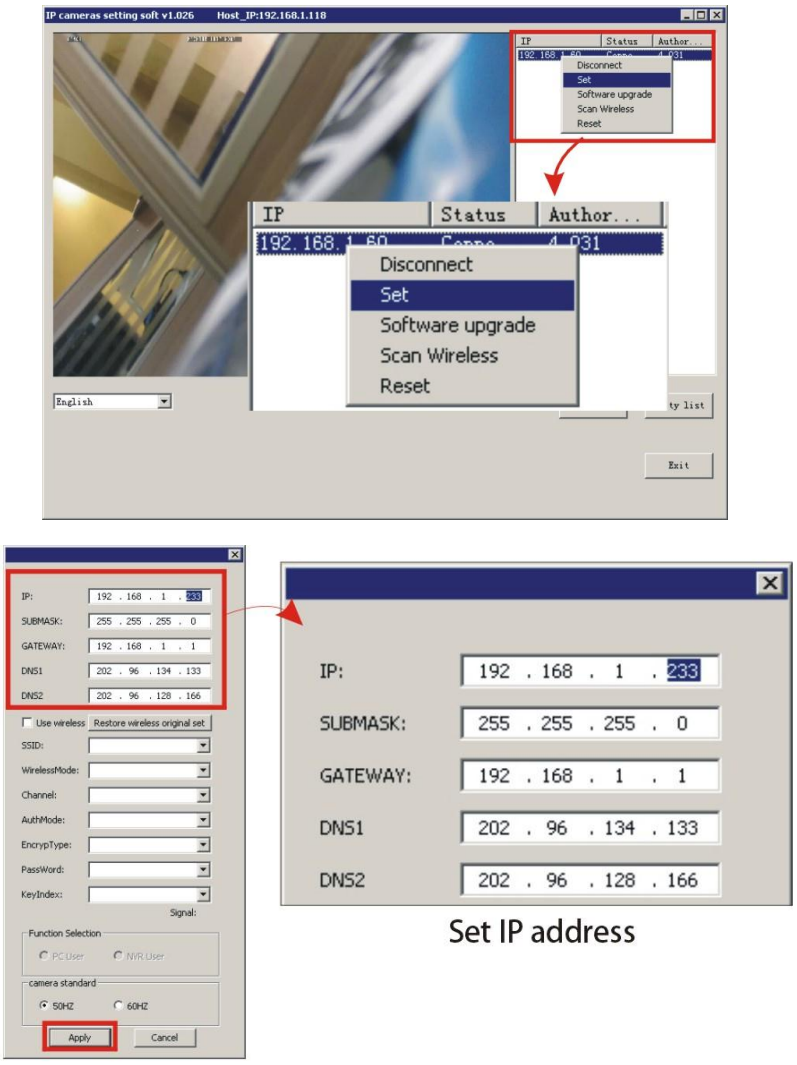
- IPCAM connected to PC via net cable，PC set to a fixed IP，PC IP could be set as192.168.1.101，subnet mask 255.255.255.0，default gateway 192.168.1.1.

Internet Protocol (TCP/IP) Properties
General
Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address
192.168. 1.101
Subnet mask
255.255.255. 0
Default gateway
192.168. 1. 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Prefered DNS server
Alternete DNS server
Advanced...
OK
Cancel
Fixed computer IP

- Copy Netcam.exe application in the CD from PC to USB disk. I t also could be download from http://www.fab111.com:83. Then run it.
- Press reset button and power on the IPCAM， NetCam software will show the IP: 192.168.1.60 thirty seconds later， and then release the button. Move the cursor to the IP and right click it, click “ connect", it will pop up the image; then right click the IP and select ”set” to set the IP. IPCAM will restart if the IP changed. If the network segment of the IPCAM and PC is the same, you could see the new IP 30 seconds later. If the network segments are different, it could not be connected.




You will see the below picture after connection.



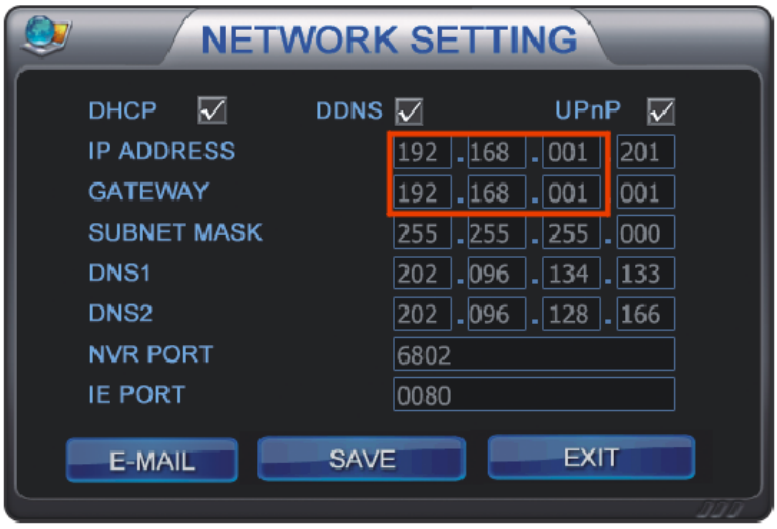

Set IP address

IPCAM setup interface

- The IP of IPCAM could be set in Camera setting menu in NVR.

NVR Camera setup interface

- Log in Network setting menu of NVR via network remote client to check the IP of NVR and IPCAM in the same network segment.

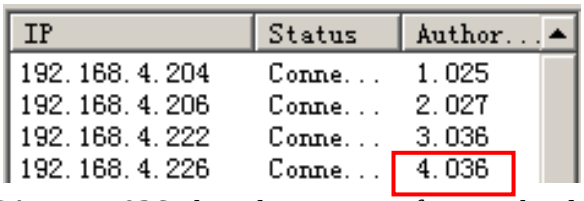



**When setting alarm information, the network segment of Router, IPCAM and NVR must be the same. NVR and Netcam software could not be connected to IPCAM at the same time.**

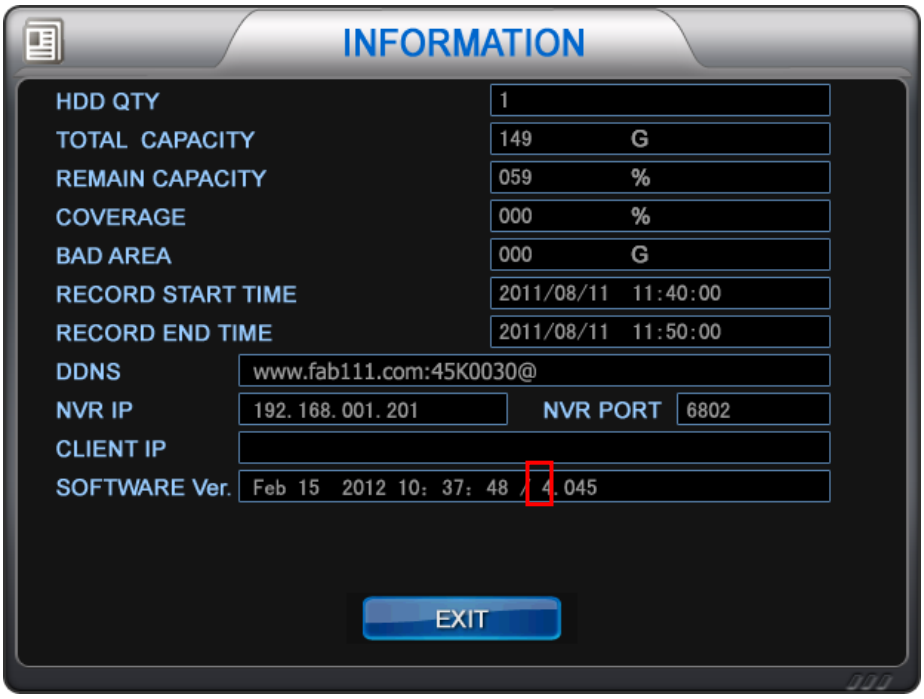
## 1.3 Corresponds to the version of IPCAM&NVR

Steps：

- Open NetCam software in PC, when you see the IP, you could see the version of IPCAM.




- If the version of IPCAM is 4.036, then the version of NVR should be begin with 4.（Press INFO key in NVR front panel, it will pop up the INFO menu.）； 1.*** is D1， 2.*** is 960H， 3.*** is 720P， 4.*** is 1080P。




# 1.4 Interface

## 1.4.1 IPCAM interface

**Full version interface：**

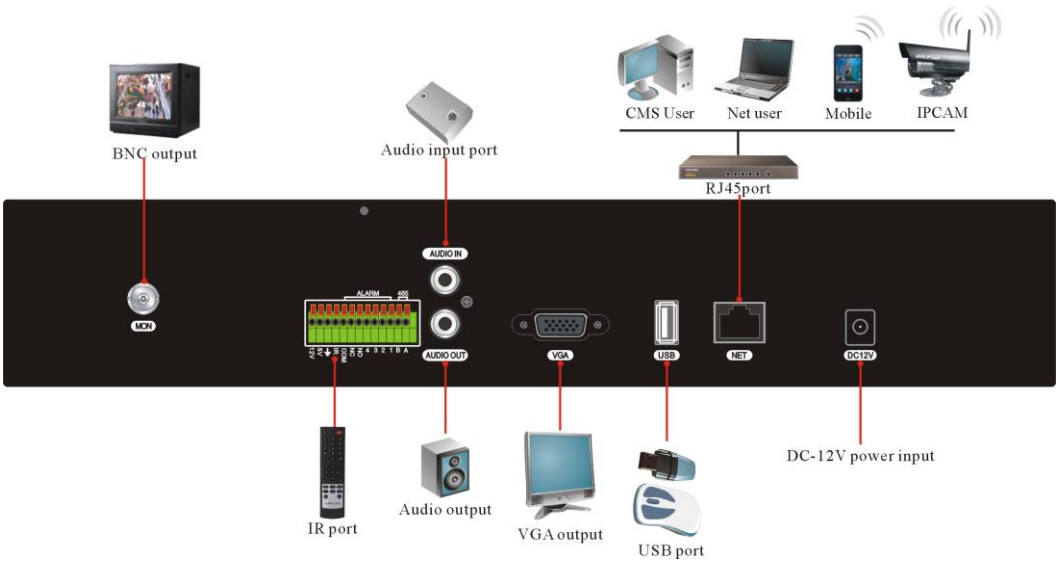
1) Audio in/out，connect to pickup and speaker, talk with NVR or CMS.
2) Alarm in/out, connect to detector and alarm signal.
3) 485interface，connect to PTZ.
4) Reset key，press it before power on until the IP show in netcam software.（within 40s），network segment is 192,168.1.*
5) RJ45network interface.
6) Power interface, 12V 1.5A.

## 1.4.2 NVR front panel and interface

- **A. Front panel：**

| name | icon | Function |
|---|---|---|
| NO. keys | 0-4 | Switch channels; input password. |
| INFO/5 | INFO/5 | Press it to popup information menu; press it again to enter into Log list; input password. |
| 16Split screen/6 | ⊞/6 | Press it to enter into four split screen, press it again to nine split screen; input password. |
| Record/7 | /7 | Record; input password |
| Play/8 | ▶I/8 | Press it to pop up search menu, select the file to play; press it in play mode to pause; input password. |
| Stop/9 | ■/9 | Stop play or record; input password. |
| Menu/0 | MENU/0 | Menu; exit from sub-menu; input password. |
| Exit | ESC | Exit; press it in live mode to hide the mouse icons. |
| Mode light | IR LOCK HDD POWER | IR（remote controller），LOCK（front panel lock），HDD，POWER |
| Direction and confirm | ▲ ▼ ◀ ▶ | a) “▲”“▼” “◀”“▶” direction keys; control the direction of PTZ; press left/ right key to play fast forward/ rewind in play mode;<br>b) “↵”confirm.<br>c) “◀”“▶” press left/ right key to play fast forward/ rewind in play mode;<br>d) “▲”“▼”switch cameras in play and live mode. The cameras after four should be switched via these two keys. |
| USB2.0 | | Connect to USB device to upgrade, backup; connect to USB mouse. |
| Power | | Power on/off |
| IR receiver | | Receive the signal of remote controller. It could not be covered. |

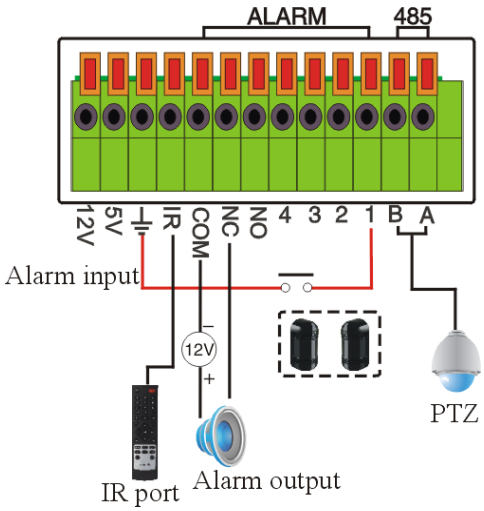
- **B. Rear panel**




1) RS-485；ALARM；IR.
2) Audio in/out
3) VGA
4) USB：Connect to USB device to upgrade, backup; connect to USB mouse.
5) Net port.
6) BNC output
7) Power

- **A. Alarm interface：**

4 channel alarm in， 1 channel alarm output.:

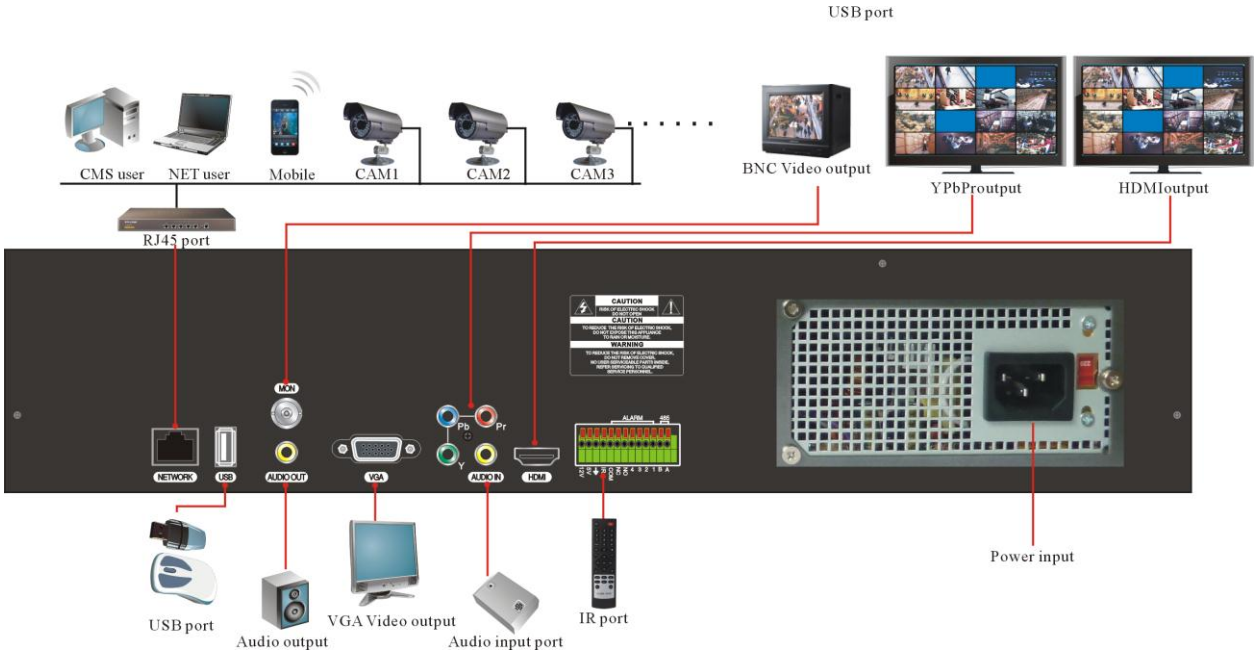



**The above picture shows a typical alarm in /out connection way. In order to make the NVR work well, it must connect to the ground as the above picture.**

- **B Front panel**

| NAME | ICON | Function |
|---|---|---|
| NO. keys | 0-9<br>X+ | a) Switch channels;<br>b) Input password;<br>c) X+ with"0～9"could switch from 10-19 |
| Record | | Record |
| Play | | Press it to pop up search menu, select the file to play; press it in play mode to pause. |
| Stop | | Stop play or record. |
| INFO | INFO | Press it to popup information menu; press it again to enter into Log list. |
| Split | | Switch the split screen. |
| Menu | MENU | Menu; exit from sub-menu; input password. |
| Exit | ESC | Exit; press it in live mode to hide the mouse icons. |
| Z+/Z- | Zoom+/- | Press it to zoom in/ out in PTZ mode. |
| F+/F- | Focus+/- | Press it to make focus+/- |
| I+/I- | Iris+/- | Press it to make Iris+/- |
| PTZ | PTZ | Press it to control speed dome. |
| Light | POWER，HDD，REC，ALARM，NET，PTZ，LOCK，IR | They will be on in working mode. |
| Direction & confirm | ▲ ▼ ◀◀ ▶▶ | a) "▲""▼" "◀""▶" direction keys; control the direction of PTZ; press left/ right key to play fast forward/ rewind in play mode;<br>b) "↵"confirm.<br>c) "◀""▶" press left/ right key to play fast forward/ rewind in play mode;<br>a) "▲""▼"switch cameras in play and live mode. The cameras after four should be switched via these two keys. |
| USB2.0 | | Connect to USB device to upgrade, backup; connect to USB mouse. |
| Power | | Power on/off |
| IR | | Receive the signal of remote controller. It could not be covered. |

- **B Real panel：**




- **B alarm interface：**

The same as A alarm interface.

# 1.5 Remote controller

| | Icon | Function |
|---|---|---|
| Power | | Press it to turn off thr NVR. |
| Audio | | Press it to pop up audio setup menu. |
| NO. keys | 0-9 | Same as front panel. |
| Lock | LOCK | Lock the NVR. |
| IR | IR | Turn on/off IR. |
| MENU | MENU | Enter in to menu. |
| 退出 | ESC | 同面板的“ESC”键 |
| Direction & confirm | | Same as front panel. |
| INFO | INFO | Press twice to popup information menu. Press three times to popup log list. |
| Split | | Switch the split screen. |
| Record | | Record |
| Play/pause | | Play and pause. |
| Stop | | Stop play or record. |

| | | |
|---|---|---|
| PTZ control | I+，I- | Press it to make iris+/-. |
| | F+，F- | Press it to make focus+/-. |
| | Z+，Z- | Press it to make zoom +/-. |
| | Auto | Control speed dome rotate automatically. |
| PTZ | PTZ | Press it to control PTZ. |

# 1.6 Mouse

Move the cursor to mouse icon will popup the prompt.

| Operation | Function |
|---|---|
| Left click | ① Select or cancel“√”。<br>② Input password in login interface.<br>③ Select each function.<br>④ Full screen in live mode.<br>⑤ Switch channels.<br>⑥ Switch the items. |
| Right click | ① To popup the mouse icons.<br>② Switch channels and items. |
| Move cursor | ① Move the cursor.<br>② To pop up the mouse icons and prompt. |
| Drag the mouse | To select the mark area in camera settings. To select motion detection area in motion alarm. Digital zoom in live or play mode in single screen. |
| Mouse wheel | Switch the items in menu. |

# 1.7 Live view

## 1.7.1 Live mode icons

Turn on the NVR to view the live image. It will show the date, time and camera name and record mode in the screen.

Note: It need to press record key to start schedule record.

| Icon | color | Description |
|---|---|---|
| | Red M | Under motion recording |
| | Red S | Under alarm recording. |
| | Red L | Video loss during recording |
| | Red T | Under timing recording. |

| | | |
|---|---|---|
| I | Green I | Waiting for event to activate recording |
| L | Green L | Video loss during waiting recording |
| ? | Yellow ？ | Have video input but no recording |
| L | Yellow L | No video input and recording. |

## 1.7.2 Mouse tools

**Mouse tools in top-right of the screen:**

Press INFO key or right click the mouse to pop up the mouse tools. “ ”exit/ close the mouse tools.

Switch the users.， lock. Click it to log in via input password.

Remote controller， No signal of remote controller.

Control audio.

Information，check the record mode, HDD mode and network mode；HDD is full，no HDD.

**Mouse tools in bottom of the screen:**

Right click the mouse to popup the mouse tools. Press【ESC】key or click “ ”to exit. Take 32ch NVR as example.

| Icons | Name | Description |
|---|---|---|
| | Split | Switch the split screen. |
| | Record | Record |
| | Play | Click it to popup search menu. |
| | Stop | Stop play or record. |

| | | |
|---|---|---|
| | Menu | Enter into menu. |
| | PTZ | PTZ control. |
| | SEQ | Switch the channels automatically/ sequence. |
| | Power | Click it to popup the power prompt. |

# 2 Operations

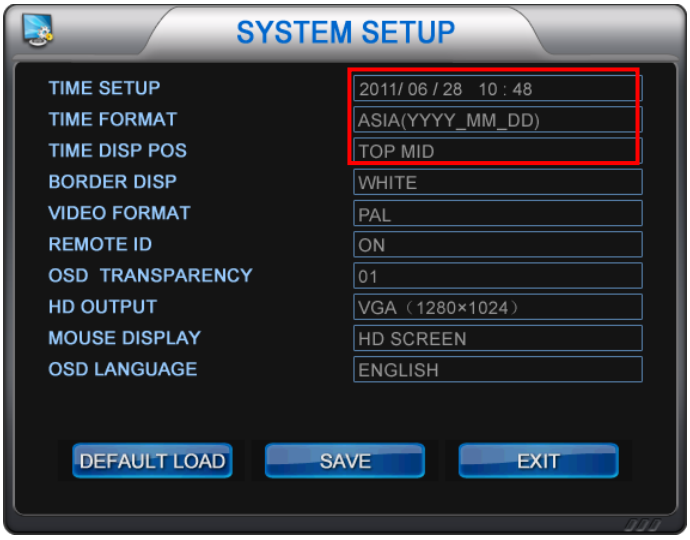
## 2.1 Turn on the NVR

Please check the voltage is fit for the NVR.
Please check the connection with other device is right or not.
Please insert the power line.
The power light is red after the NVR is power on.

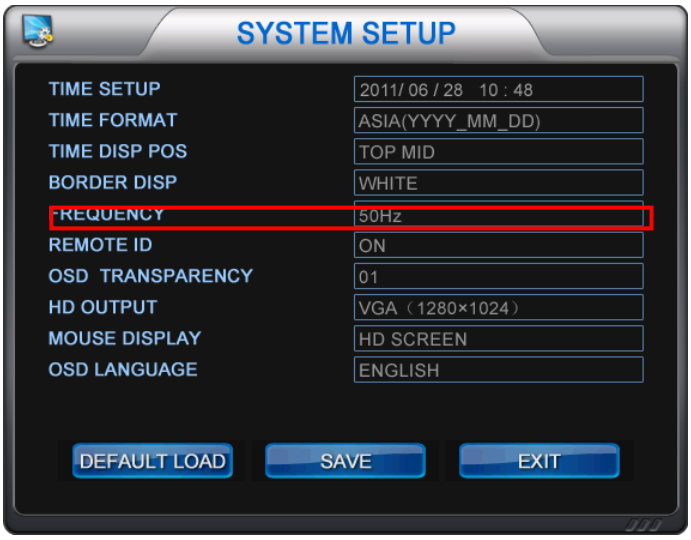
## 2.2 System setup

- System time setup

  Select "SYSTEM" in main menu to enter into SYSTEM SETUP interface.

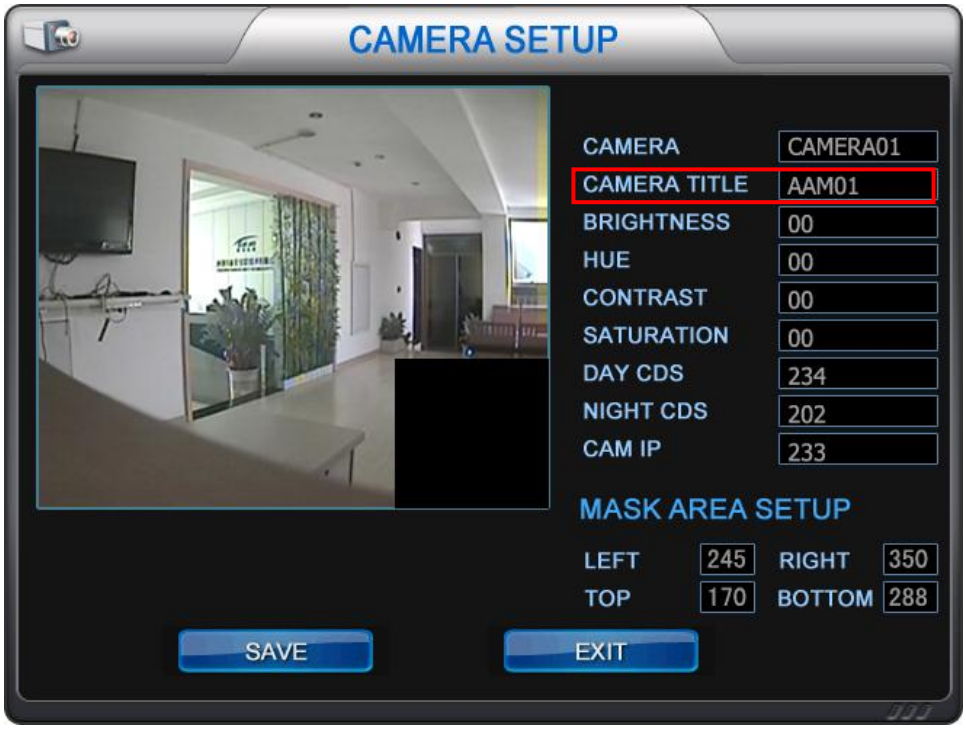



The system menu of 720P/1080P resolution ：




- **Frequency:** 50/60Hz，50Hzfor PAL，60Hz for NTCS.
- **HDMI output:**｛VGA(1280×1024)；VGA(800 ×600)；HDMI；YPbPr｝。It should be corresponding to the monitor.
- **Mouse display：** To select CVBS or HD monitor.

# 2.3 Camera setup and area mark setup




## 2.3.1 Change the camera name

Move the cursor to the letters, left/click the mouse to change the camera name.

## 2.3.2 Area mark setup

Drag a black square to hide some privacy part.

Operation way：

Step one select the channels.

Step two drag the mouse to setup the square area.

**Setup the left/right/up/down border**

Left Click the mouse in the mark area to cancel the mark. Setup the place of left/right/up/down to modify the area.

# 2.4 Alarm setup

Example for alarm setup:

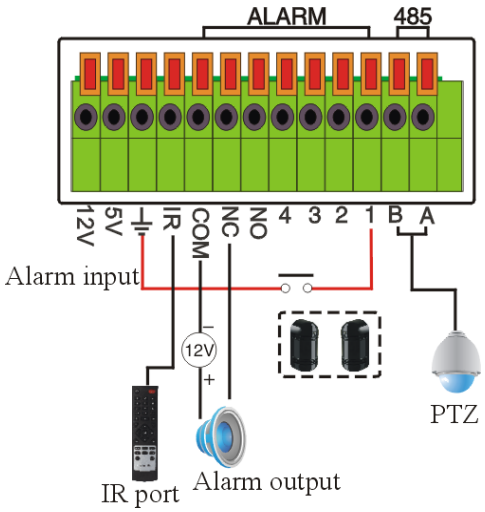
Channel 2

22:20 to 7:10next day.

It will alarm when the sensor feel somebody passed. The buzzer in the NVR will beep and send email.

**Operation steps:**

**Step one, connection**




***Note**, If connect the alarm for NVR, please connect the alarm in port of the IPCAN with the ground; or it will continue to alarm when schedule alarm happened. If connect the alarm for IPCAM, then please connect the alarm in port of the NVR to the ground.*

**Step two, email setup**

Firstly confirm the network connection of the NVR is well.

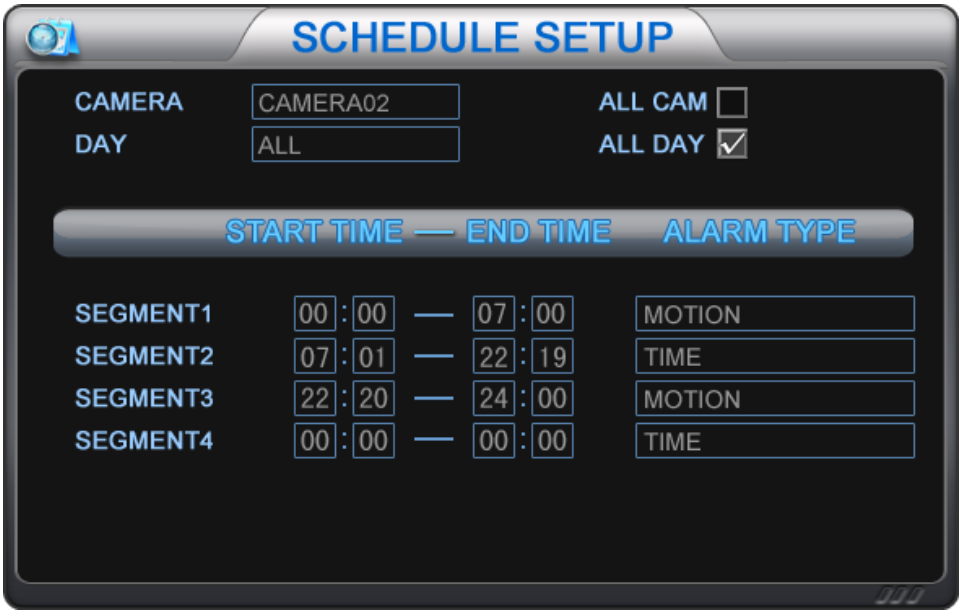
Then please follow the instruction: Menu→network setup-→email

1) Time interval: To set the time interval for sending email. It should be in denomination of minutes.
2) Email server name: To set the email server for sending email.
3) Email server port: To set the email server port. Generally the SMTP port is 25.
4) User name: It's the email user name.
5) User password: It's the email password.
6) Password confirmation: To confirm your email password.
7) Receiving address: It's the email address.
Operation way: moving mouse cursor to the each box and left click the mouse to edit.
You could click "TEST" for testing. Please make sure the NDS is right in network setup.

⚠ If the test email is failed, please check the setup of sending email in the web. It must open SMTP service for the email.

### Step three, schedule setup.

Menu-->schedule setup,




- **Camera：** select a channel or all channels.
- **Date：** set the date for recording. It could be set four time segment.
- **Time segment：** set the recording type. (time, motion, alarm, motion + alarm)

### Step four, alarm setup

⚠ ***It no need alarm for motion, just set for sensor alarm; or the alarm will happened frequently.***

**Step five, set recording area and sensitivity for motion recording.**

**Sensitivity:** Select number 1-50 for motion sensitivity. Generally speaking, numerical value higher, the sensitivity better.

**Detection area:** Select the motion detect area. Drag the mouse to select the area. When it detects there is movement in this area, the boarder color will turn red.

**Step six, start recording**

Press record button to start. If you didn't press the record button, there won't be alarm and record when motion happened.

# 2.5 Record operation

## 2.5.1 Preparation for recording

Connect all relevant device and power on for them. Confirm that there are video in and audio in.
Press INFO key to check the hard disk information. If the left capacity of the HDD is not enough, please change it or open the overwrite function in HDD management menu.
Enter into schedule setup menu to set the relevant setup.
Enter into record setup menu to set record parameters.

- **Resolution:** 352×288（CIF）PAL，352×240（CIF）NTSC
  D1:704×576（D1）PAL，704×480（D1）NTSC；
  960H：960×576（960H）PAL，960×480（960H）NTSC；
  720P: 1280×720（720P）；
  1080P:1920×1080（1080P）。
  The system will restart after the resolution changed.
- **Quality (image)：** To set the image quality at high, middle and low.
- **Frame rate：** To modify the frame rate per second. 25fps（PAL）or 30fps（NTSC）
- **Audio:** To set audio recording on and off.

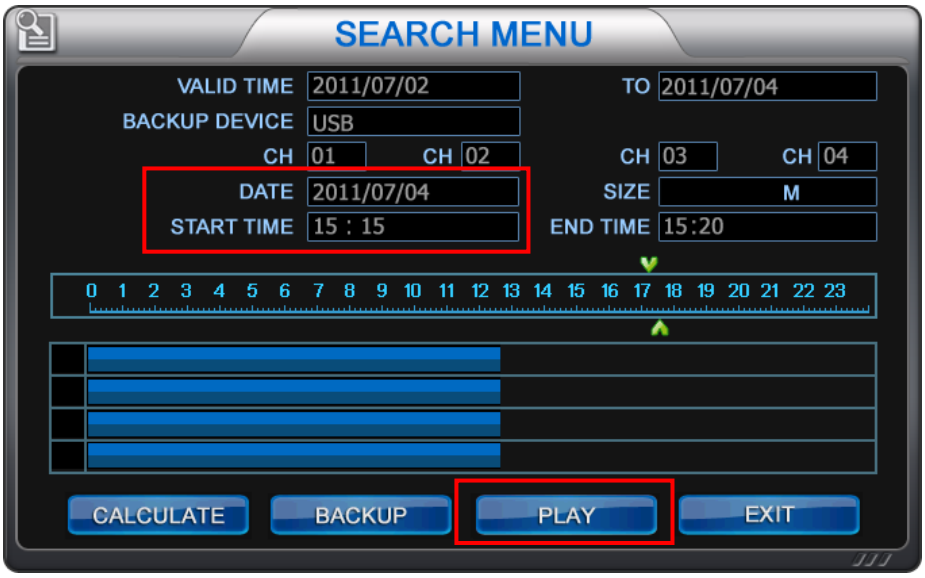
## 2.5.2 Recording start and stop

a) Start recording:：press【 】key in front panel or use mouse to click the icon “ ” in mouse tool bar to start record. Once start recording or HDD begin to write, the HDD indicate light will turn on.

b) Press【■】key in front panel or use mouse to click the “ ” icon or press【ESC】key to stop record.

# 2.6 Playback

Click “ ” icon to enter recording search interface. You could search the recording file and backup the file into another device. Also you could search for a video file to playback.


SEARCH MENU
VALID TIME 2011/07/02
TO 2011/07/04
BACKUP DEVICE USB
CH 01 CH 02 CH 03 CH 04
DATE 2011/07/04
SIZE M
START TIME 15 : 15
END TIME 15:20
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
CALCULATE
BACKUP
PLAY
EXIT

You could see the play status prompt in the bottom of the screen.

PLAY ▶ : normal play PAUSE ⏸ pause STOP ■ stop

FAST ▶▶ ×2 / FAST ▶▶ ×4 / FAST ▶▶ ×8 / FAST ▶▶ ×16 / FAST ▶▶ ×32 / FAST ▶▶ ×64

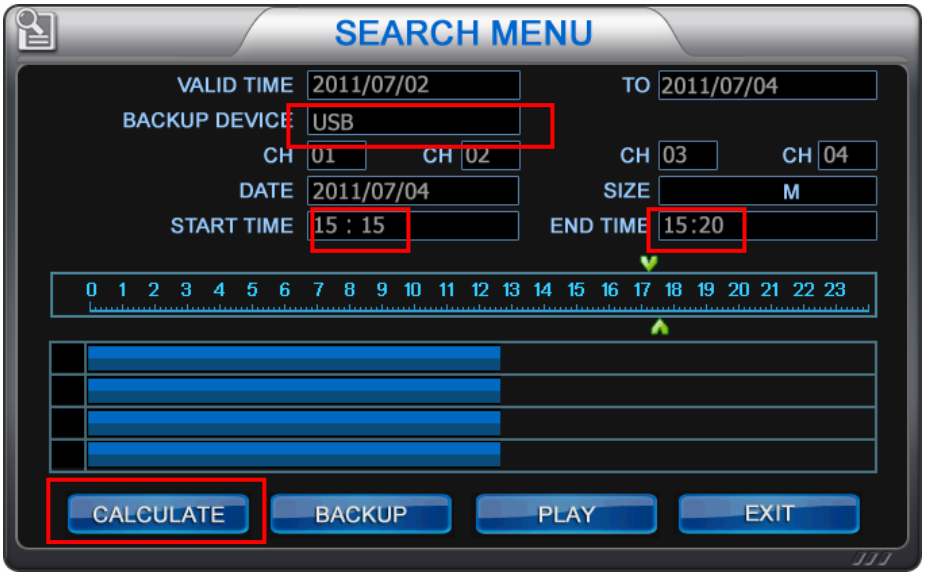
the speed of fast forward

BACK ◀◀ ×2 / BACK ◀◀ ×4 / BACK ◀◀ ×8 / BACK ◀◀ ×16 / BACK ◀◀ ×32 / BACK ◀◀ ×64

The speed of fast rewind.

**Operation way**：in play mode， press【 ▶▶ 】/【 ◀◀ 】key once/twice/three times…..six times to play faster and faster. Then press【 ▶▶ 】/【 ◀◀ 】again to play normally. Press【 ▶| 】 and 【 ▶▶ 】/【 ◀◀ 】to play forward or rewind one frame.

# 2.7 Backup




- **Select backup device**

**USB / CD(500M) / DVD 1.5G / MINI CD(180M)**

**USB backup**：Less than 30G. If the usb disk could not be read, please format it firstly.

**USB format way:**

Insert the usb disk into US port of NVR.

"menu" → "HDD management"

Select the disk name：disk A，then click "format".

- **Select backup channels**（4 channels max）。
- **Select backup time**: select the begin time and end time.
- Calculate: To calculate the video file's capacity which you want to backup. Before your backup, please try to proceed this operation

*Note: not support mobile HDD backup.*

# 2.8 Audio setup

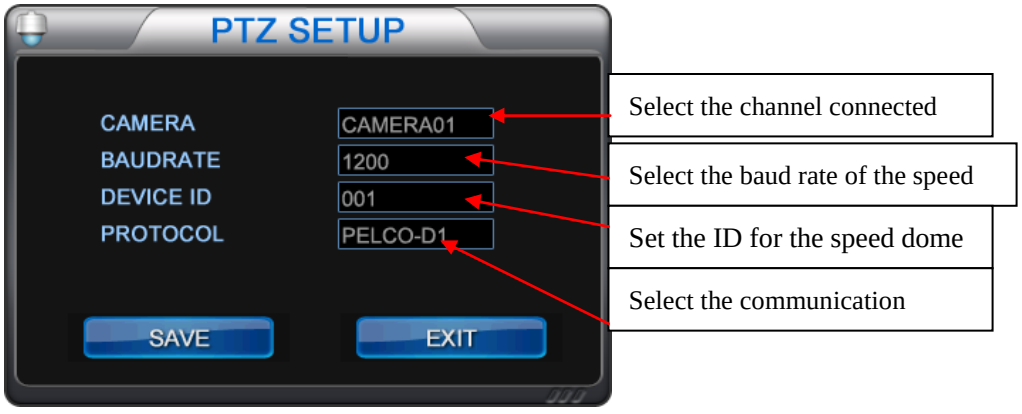
Press【AUDIO】key in front panel or in the remote controller or click“ ”to enter into audio setup menu.

- **“monitor”: Mute, client, CH1-CH9 optional.**

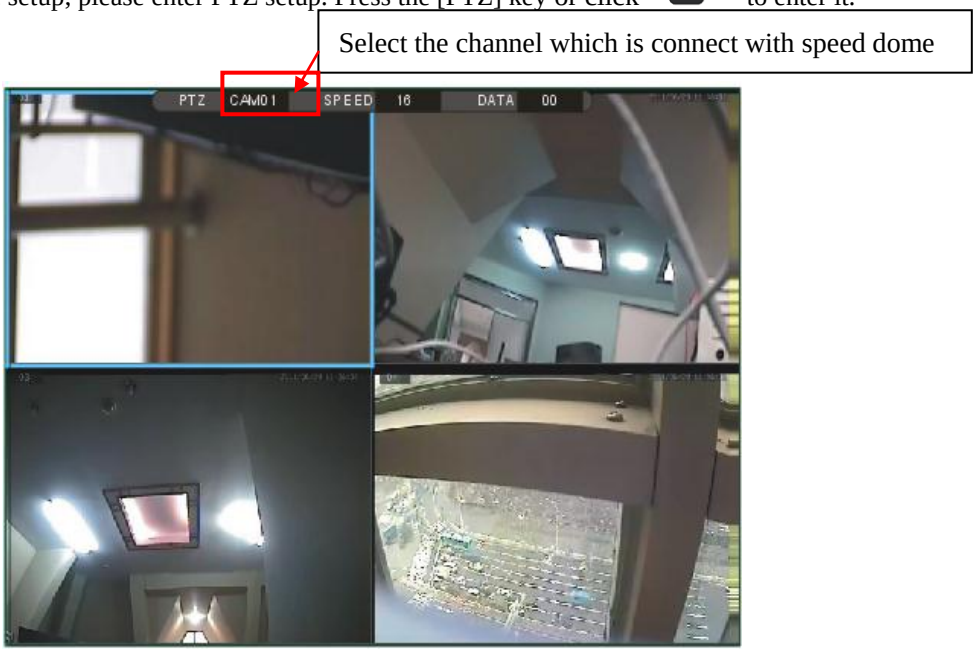
- **Broadcast:** NVR transfer the live audio to client or cameras via pickup device. If client/ some channel is selected, the audio will be transfer to the client/ some channel. is selected.

# 2.9 PTZ setup

（1）Set the parameters in PTZ setup menu firstly.



（2）After speed dome setup, please enter PTZ setup. Press the [PTZ] key or click “ ” to enter it.




Then it will display "PTZ: CAM01 SPEED:16 DATA:00" in the screen. It means DVR is under PTZ status now. Press [PTZ] or [ESC] again to exit PTZ interface. When DVR is under PTZ status, it will display the mouse tool bar as below:

| Icons | Name | Description |
|---|---|---|
| | Direction key | to move speed dome up, down, right and left. |
| | Rotate | To make speed dome rotate automatically.<br>Press it again to stop rotating. |
| | zoom | Zoom in and zoom out |
| | preview | To check the preset data already saved. |
| | Set | To make preset setup. |
| | Close | Shut off PTZ and exit PTZ interface. |

- **Modify parameters:**
  You could use mouse or remote control to modify the preset data. Select the item which you want to modify by press [SPOT] key on remote control or click the item directly by mouse. Then modify the data by left/right click by mouse.
- **Preset setup:**

a) Select image point in selected camera by “ ” keys. Set a number for the image in “DATA”, such as 01， then click “ ” to finish the setup.

b) To view of image point which has been saved, you could select the corresponding number in “DATA”, then click “ ” to view.

## 2.10 User setup

Before enter USER SETUP interface, you should enter USER LOGIN interface and type the correct password first.

- **User name:** To select administrator and users. There are 4 user name , ADMIN0, USER01, USER02 and USER03. ADMIN0 is default one.
- **Password:** To set user's password. The default password is 000000 for ADMIN0, 111111 for USER01, 222222 for USER02 and 333333 for USER03. And password is changeable by users.
- **Authority setup:** As administrator, you could enter USER SETUP to grant normal user authority to make setup.

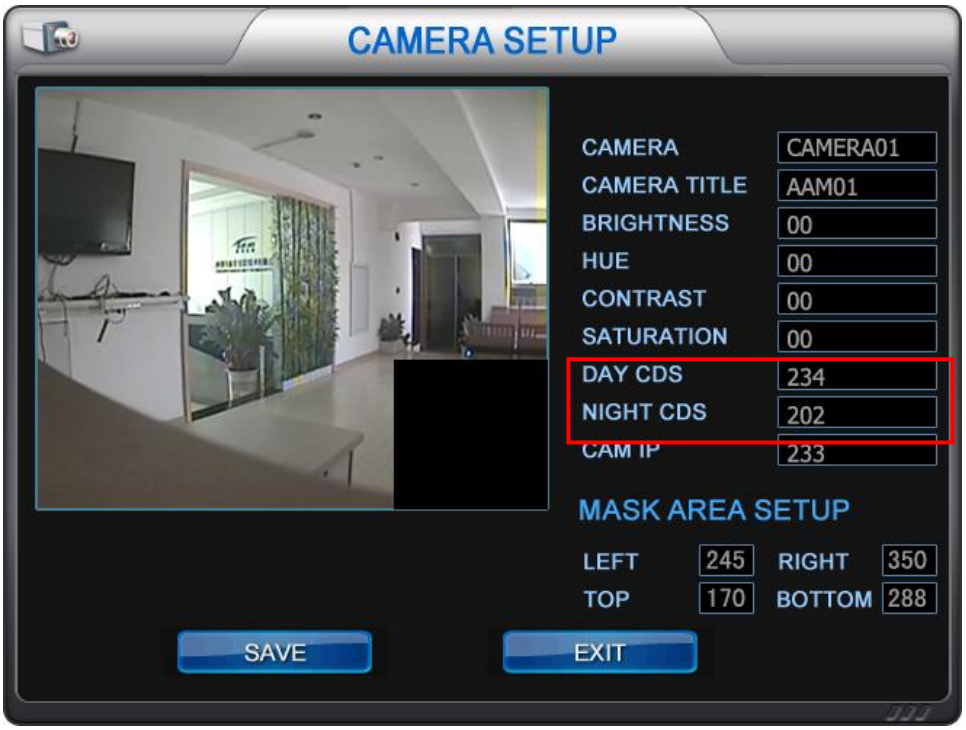
Unlock setup: If the DVR was locked, please click the " " on right top of screen. Then it wills popup the interface of USER LOGIN. Type the user name and password to unlock the DVR. Then the icon " " will turn to blue " ".

## 2.11 User shift

Please enter USER LOGIN interface to shift the user and type correspond password.

## 2.12 Night view setup

Enter into camera setup:




- **Day light perception：** Images switch to day mode when the light intensity is greater than the value, the image is color. Default one is 234.
- **Night light perception:** Images switch to night mode when the light intensity is smaller than the value, the image is white and black. Default one is 202.

## 2.13 Turn off the NVR

Soft turn off：exit from all operations and back to live mode. Press “ ” key in front panel or remote

controller or click the mouse icon“ ” to popup turn off prompt, select OK to turn off the NVR.，press“ ” key three seconds to restart the NVR.

Hard turn off：Pull the power line directly.

Abnormal crash: If the NVR restart five times failed in one hour, it will keep crash, the buzzer will beep. Please cut off the power and power on again.

## 2.14 The status of HDD

Press INFO key in live mode, you could see the following icons,

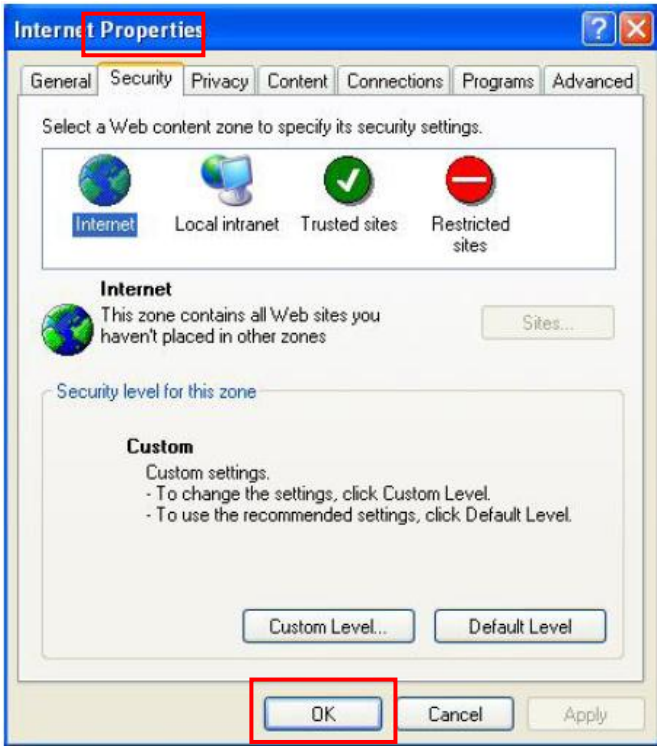
The system information and HDD is full.

： No HDD.

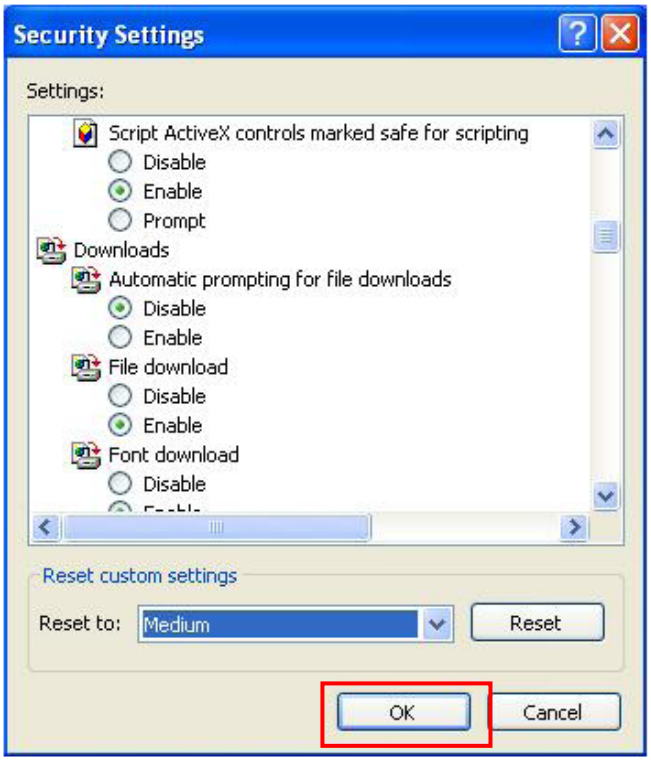
## 2.15 IE connection

**Operation steps:**

**Step one: click security,** Right-click the icon “ ” , then click “properties” → “security” in the following dialog box.



**Step two, check all items in** ActiveX，set them as “enable” or “prompt”.



**Step three,** IE ActiveX download address：http://www.fab111.com:82/， or download it from the NVR IP, e.g.：http://192.168.1.220:82/，82 is the IE port set in Network menu. it need to do port forwarding in the router when download IE ActiveX controls from WAN.

**Step four, it will popup login interface after the IE ActiveX controls was download.**

There are four login way.

a) NVR LAN IP with DVR port, e.g.:：192.168.1.220:6802.

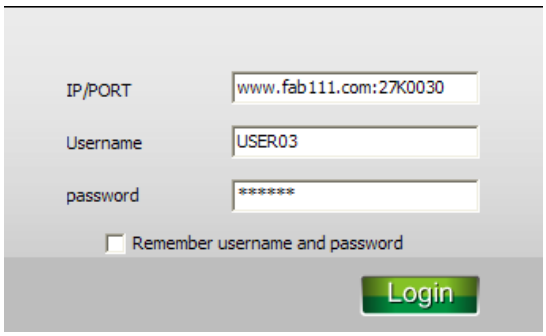
WAN connection:

Firstly confirm the WAN IP in the router is the real and useful IP. It must to do port forwarding for the NVR port in the router. Then check the setting is successful or not in http://www.yougetsignal.com/tools/open-ports.

b) Router domain name with DVR port. E.g.: avdf.dyndns.com:6802. It need to apply for a domain name in the web and fill in the domain name in the router.

c) Router WAN IP with DVR port. E.g.：20.30.40.50:6802. If the IP is fixed, this way could be used.

d) Free supply domain name with NVR number. E.g. www.fab111.com:27K0030. Please select DDNS in network setup menu of NVR. Then you could check the DDNS information in INFO menu. Please check the DNS setting. If there is "@" following the NVR number, the NVR connect to the server successfully.

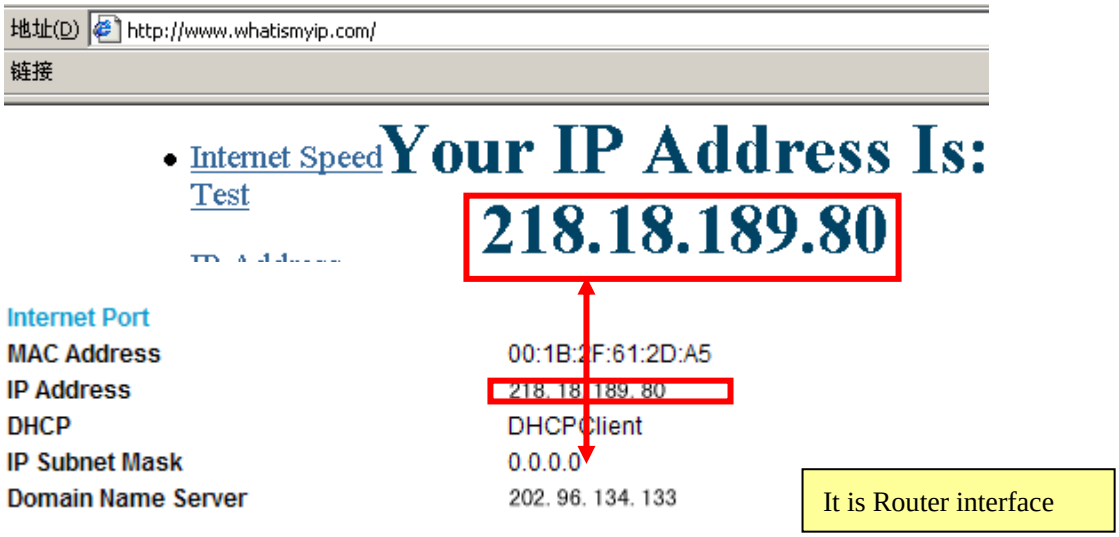


Click the left top link or http://www.fab111.com:83 to download the latest CMS and iMac CMS. CMS support strong function.

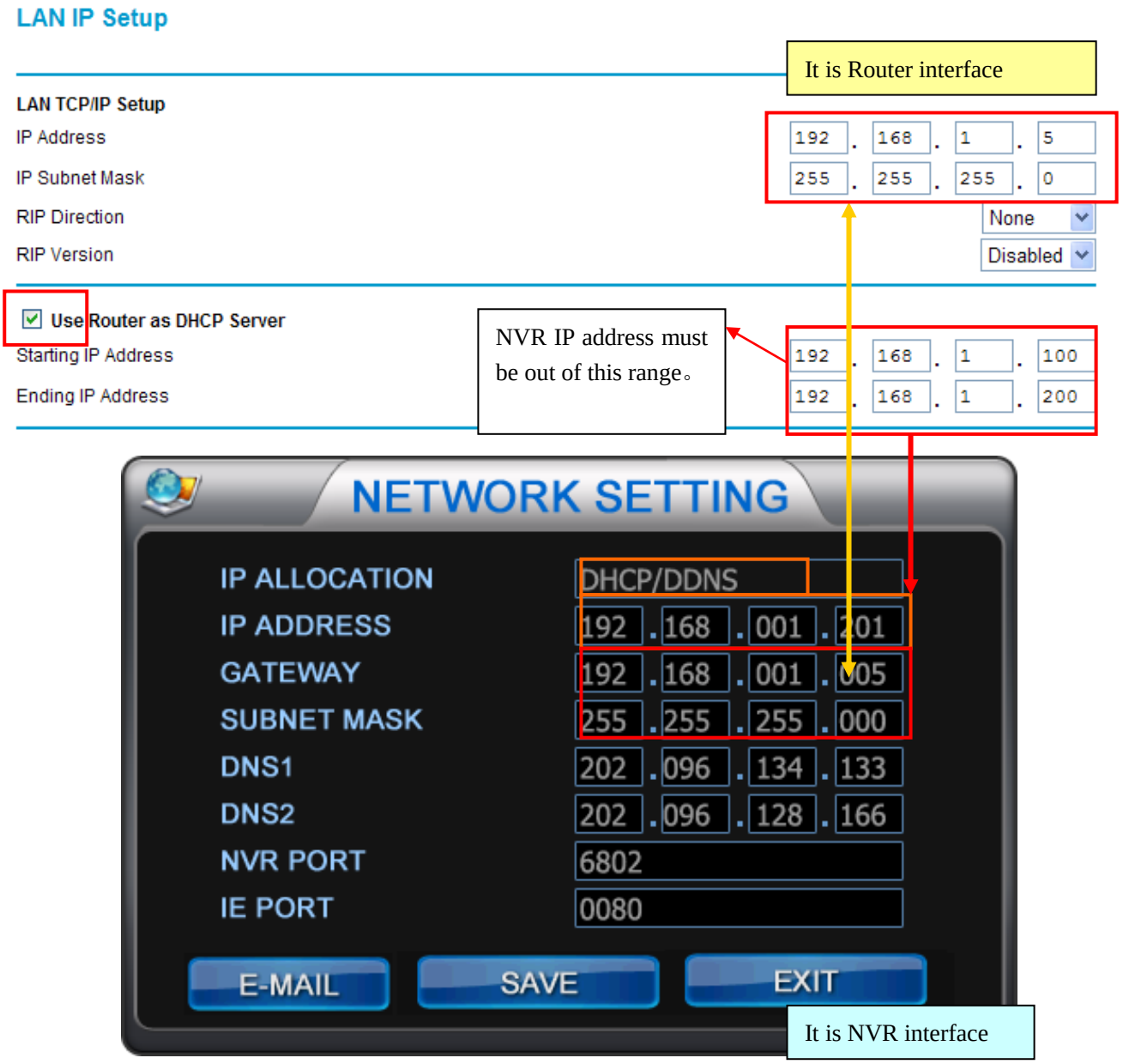
## 2.16 NVR networking example

1. Connect the NVR net cable with the PC. Type in http://www.google.com in IE address bar. Check the WAN connection is well or not. Then you could see the page.

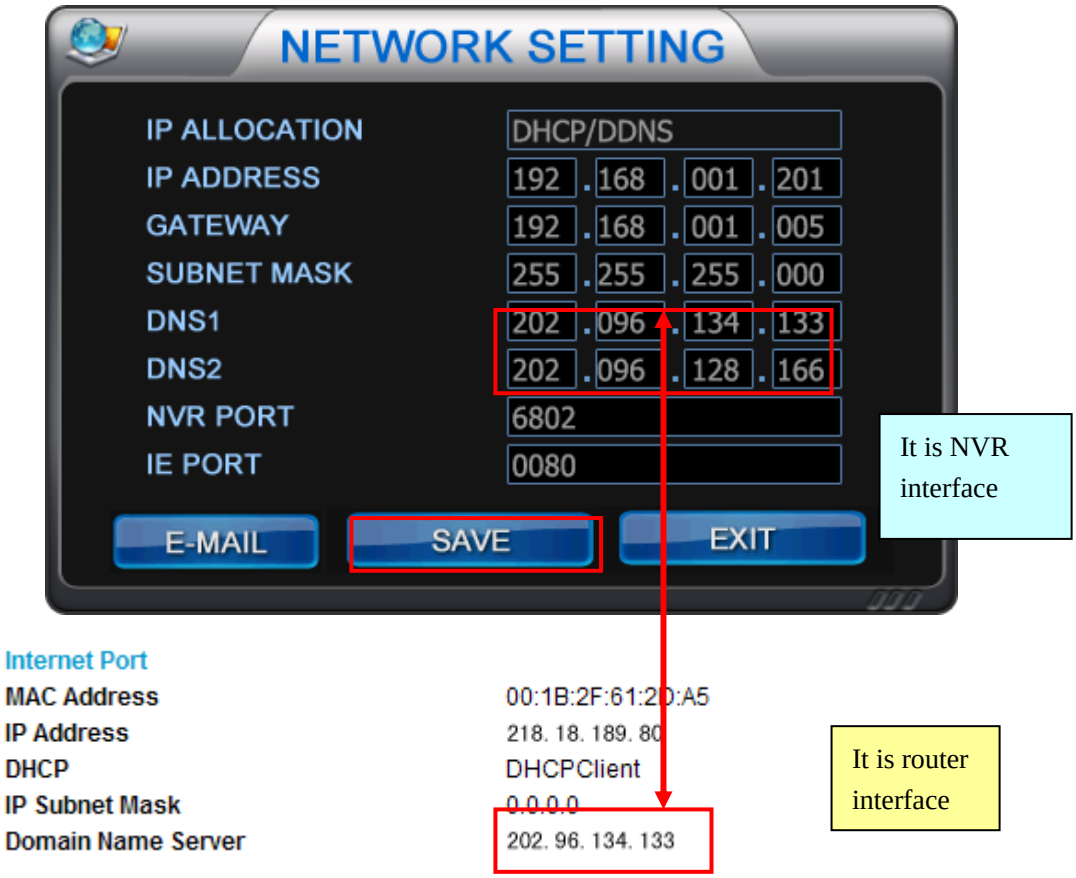
2. Confirm the router IP is the real and useful IP. Type in http://www.whatismyip.com in the IE address bar. The IP shows here must be the same as the router IP. If no, it is not the real IP.



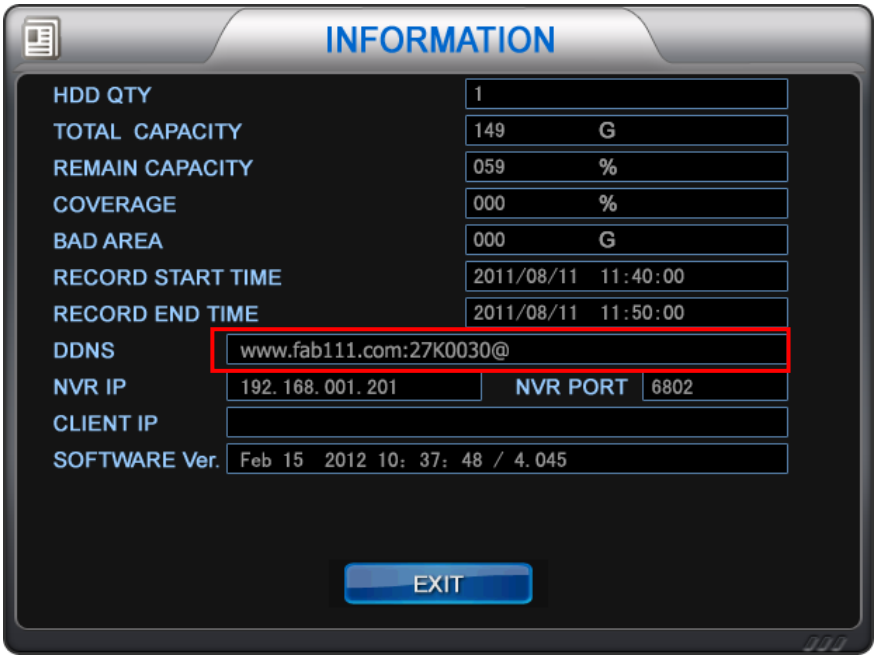
3. Set the IP item as “DHCP/DDNS” in network setup menu in NVR. If the DHCP in the router is open, the NVR will get the IP from the router automatically. Please change the IP, it should out of the range of DHCP.



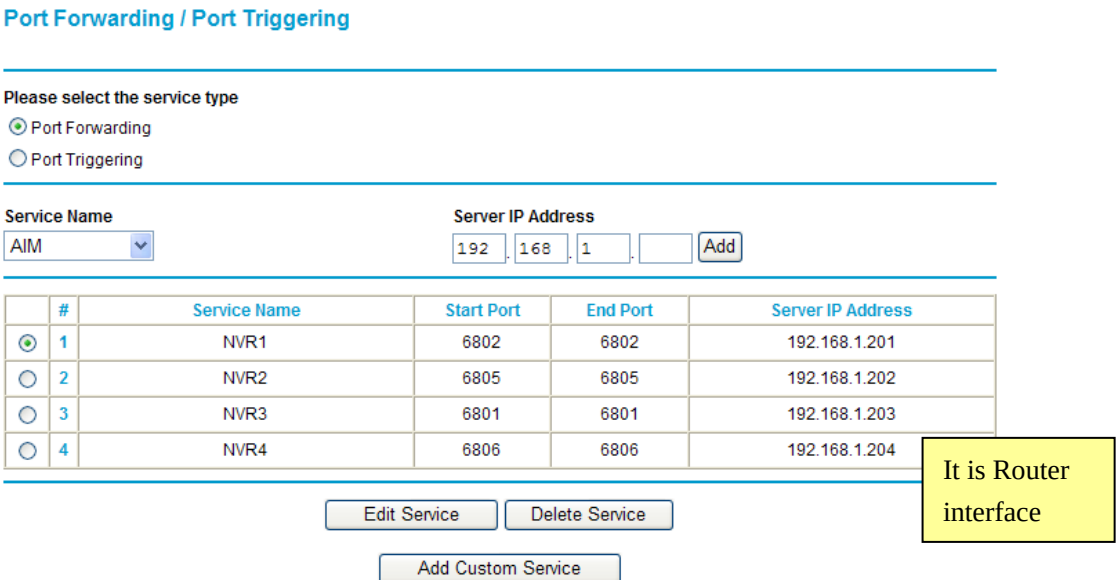

Check DNS IP， it should be the same one in the router.



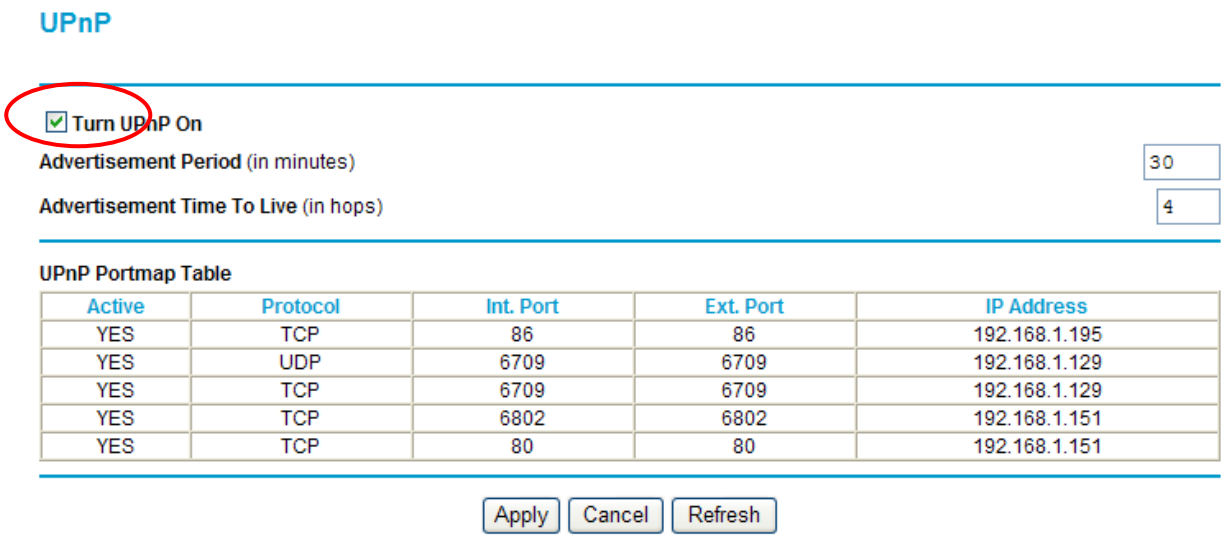

4. Open INFO menu in NVR. It will show www.fab111.com:27K0030@ in DDNS item. If no @, the connection between NVR and server is failed. Please exit and enter into the INFO menu again after one minute. If there is no @ again, please check the DNS setting of NVR is right or not.



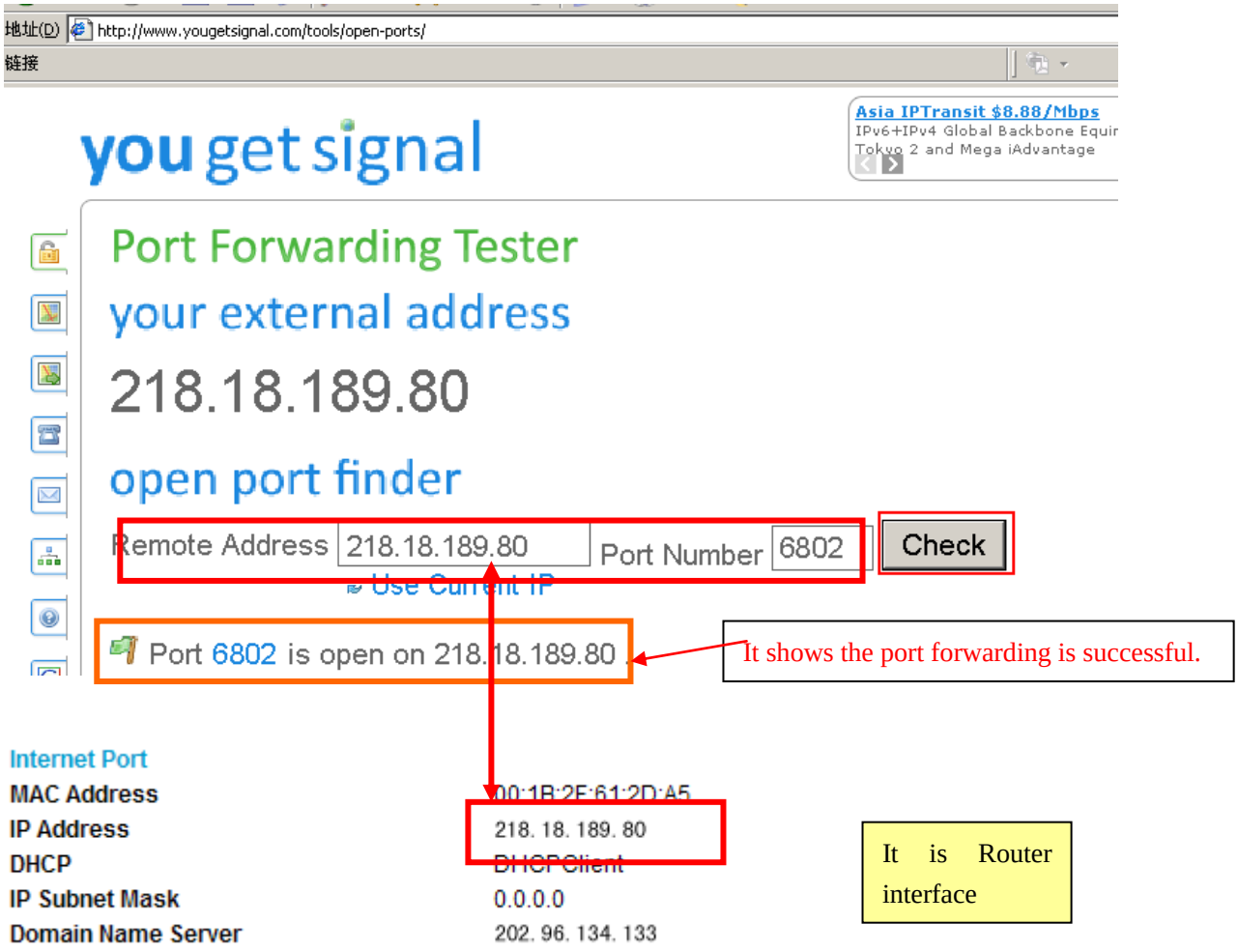

5. Set port forwarding in router. Set different port for different NVR and port forwarding separately.



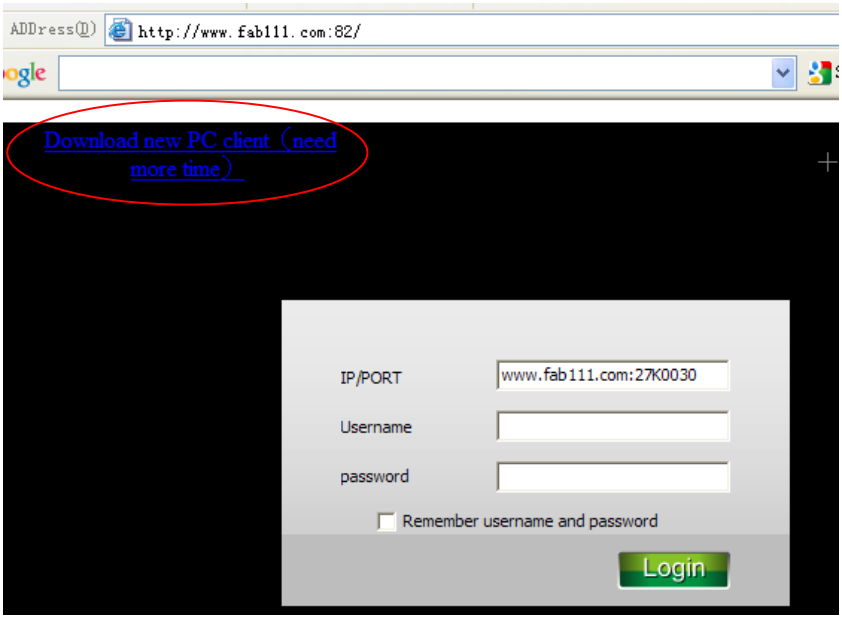

Open UPnP function in the router to fulfill the port forwarding of NVR automatically. It is suggested to change the port in network setup menu after UPnP is open. And set auto port forwarding at once after save the port. Click the refresh icon to see the latest IP and port.



You could check the port forwarding successful or not in http://www.yougetsignal.com/tools/open-ports.

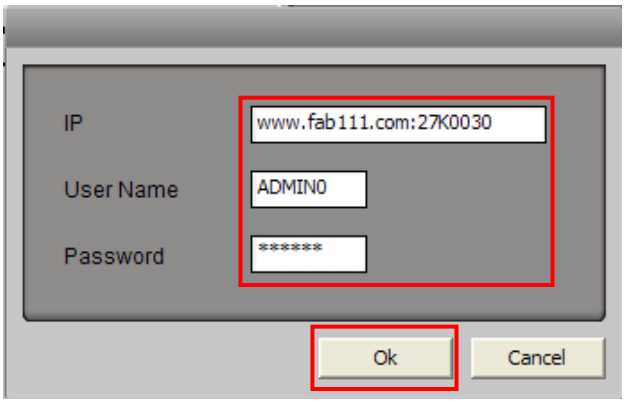



6. Download the latest CMS software in http://www.fab111.com:82/.



7. Open the MS client software, type in the domain name, NVR number, user name and password to test the connection. If the connection is failed, please check with LAN IP.
   Open the client software, right click NVR/CMS, select new IP, add it and connect it.

This is client software interface



*Note: the setting of router may not support WAN IP connection in local network, then the connection via domain name and NVR number will also fail.*